

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/916,517	LEE, TAE WON	
	<b>Examiner</b>	<b>Art Unit</b>	
	Trang U. Tran	2622	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment in response filed June 09, 2006.
2. ☒ The allowed claim(s) is/are 1-15 and 17-18 (renumbered 1-8, 13-17 and 9-12, respectively).
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |   |
|---|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)                                   |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date <u>6/25/2006</u> . |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment   |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance                          |
|   | 9. <input type="checkbox"/> Other _____.  |

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with David Bilodeau on June 21, 2006.

The application has been amended as follows:

In claim 1, line 16, the phrase "tracking a power" has been changed to —tracking the power--, and line 18, the phrase "tracking a power" has been changed to —tracking the power--.

In claim 3, line 8, the phrase "a wanted form" has been changed to —the wanted form--.

In claim 5, line 17, the phrase "tracking a power" has been changed to —tracking the power--, and line 19, the phrase "tracking a power" has been changed to —tracking the power--.

In claim 9, line 40, the phrase "detecting a power" has been changed to —tracking the power--, and line 43, the phrase "detecting a power" has been changed to —tracking the power--.

These changes will place this application in condition for allowance.

2. The following is an examiner's statement of reasons for allowance:

The independent claims 1 and 5 identifies the uniquely distinct features: "wherein the control part comprises: a signal power tracker tracking a power of the tuned channel signal using an output signal of a signal power detector; a ghost power tracker tracking a power of the ghost signal using an output signal of a ghost power detector, a signal vs. noise ratio (SNR) tracker tracking the signal vs. noise ratio using an output of a signal vs. noise ratio calculator; a tracking processor tracking states of the tuned channel signal using output signals of the trackers in a presently-selected antenna pattern and then changing the antenna pattern in order stored-in the memory if the tracked states fail to maintain effective value sizes, a scan processor attaining an effective signal power and antenna pattern by varying the directionality of the antenna using an output signal of the tracking processor and then storing the power and pattern values in the memory, and a sort processor aligning the stored antenna pattern values in order of the signal power values". All the references of record, either singularly or in combination, fail to anticipate or render the above underlined limitations obvious.

The independent claim 9 identifies the distinct features: "wherein the VSB receive chip comprises: an automatic gain control part controlling a gain of an output signal of the intermediate frequency automatic Rain control part; a timing and carrier restoration part restoring a timing and carrier loss on an output signal of the automatic gain control part; an equalizer equalizing an output signal of the timing and carrier restoration part, a phase tracker tracking a phase of an output signal of the equalizer, and a forward error corrector correcting a forward error on an output signal of the phase tracker and outputting the VSB signal, and wherein the detection part comprises: a signal power

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detector detecting a power of the tuned channel signal using an automatic gain control signal from the automatic gain control part of the VSB receive chip; a ghost power detector detecting a power of a ghost signal using an output signal from the equalizer or an output signal of the timing and carrier restoration part of the VSB receive chip; and a signal vs. noise ratio (SNR) calculator calculating a ratio between a signal and a noise using an output signal of the phase tracker of the VSB receive chip". All the references of record, either singularly or in combination, fail to anticipate or render the above underlined limitations obvious.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trang U. Tran whose telephone number is (571) 272-7358. The examiner can normally be reached on 8:00 AM - 5:30 PM, Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L. Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TT  
June 25, 2006



Trang U. Tran  
Examiner  
Art Unit 2622